

2001 KINDERGARTEN RETROSPECTIVE SURVEY RESULTS
Department of Health Services, Immunization Branch
July 23, 2001

The kindergarten retrospective survey (KRS) is an annual survey that provides state and regional estimates of vaccination coverage among kindergarten children as of their second birthday. This report presents KRS findings for 2001, which indicates that vaccination coverage among California children continues to improve. The most significant vaccination coverage increases occurred among Hispanic children.

The 2001 KRS was conducted in 3% of the state's kindergartens (n=226) in concurrence with the 2001 Spring selective review (SR). Vaccination information was extracted from one in every six school immunization records (blue cards) from each of the 226 kindergartens participating in the SR. The sample included 22 exemptions. Most of the 2,306 children in the 2001 KRS sample were born in 1995.

Compared with the results of the 2000 KRS, there were statistically significant statewide increases in coverage of the 4:3:1 vaccine series (four or more doses of DTP, three or more doses of poliovirus vaccine, and one or more doses of any measles-containing vaccine (MCV).) from 67% to 71% (Table 1). Although, vaccination coverage with three doses of Polio, four doses of DTP, one dose of MMR and three doses of Hepatitis B did not increase significantly (Table 1).

Four regions (Los Angeles Co., Other Southern California, San Francisco/Bay Area, and Rural Northern California) showed significant improvements in 4:3:1 vaccination rates from the 2000 KRS (Table 2). All seven regions experienced significant increases in 4:3:1 vaccination coverage rates between the 1997 and 2001 KRS (Table 2).

At the state level, coverage with the 4:3:1 series among Hispanic children increased to 71% from 66% in the 2000 KRS and 60% in the 1999 KRS (Table 3). In contrast, 4:3:1 coverage among African-American children remained under 60% (Table 3). Similar differences were seen for vaccination coverage with three doses of Polio, four doses of DTP, one dose of MMR and three doses of Hepatitis B and one dose of Hib (Table 4). In general, the statewide differences in 4:3:1 coverage among children in different racial/ethnic groups were also observed across regions (Table 5).

Statewide vaccination up-to-date rates showed improvements at some age checkpoints (Table 6). However, up-to-date rates among African-American children at all age checkpoints were lower than up-to-date rates among children in other racial/ethnic groups (Table 7).

The general trend in increasing coverage is encouraging, considering the Healthy People 2010 goal of 90%. The marked improvement of 4:3:1 series in Hispanic two year-olds is encouraging, but the lack of increase in coverage for African-American 2 year-olds raises some concern. Comparisons with the equivalent year in the National Immunization Survey validate the results of the Kindergarten Retrospective Survey.

Attachment Tables:

Enclosed is a full set of tables showing the 2001 results. Tables 1-3 compare results from 1999, 2000 and 2001 Retrospective Surveys. Table 4 compares immunization levels of two year-olds by race and age checkpoint. Table 5 shows immunization rates by race/ethnicity and region. Table 6 provides similar data broken down by age checkpoint. Table 7 shows immunization levels by race/ethnicity and antigen at the second birthday. Tables 8-10 provide immunization coverage information specific to birthplace, type of record presented, and for hepatitis B, respectively. Table 11 is a comparison of estimates reported by the National Immunization Survey and Kindergarten Retrospective Survey. Tables 12-15 are confidence intervals for the update tables. Figures 1-5 are graphic representations of the above data. For further information, please contact Nisha Gandhi at 510/540-2236 or NGandhi@dhs.ca.gov, or Elisha Larez at 510/540-3147 or ELarez@dhs.ca.gov at the Department of Health Services, Immunization Branch.

KINDERGARTEN RETROSPECTIVE SURVEY CALIFORNIA, 2001

TABLE 1: KINDERGARTNERS UP-TO-DATE FOR 4:3:1 SERIES AT 2ND BIRTHDAY, BY VACCINE TYPE & YEAR

VACCINE TYPE	2001 N= 2306	2000 N= 1737	1999 N=2072
FULL SERIES OF			
3 POLIO, 4 DTP, & 1 MMR	71.0%	66.6%	63.9%
Polio (3+)	91.5%	92.2%	86.6%
DTP/Td (4+)	78.0%	75.7%	73.6%
MMR (1+)	84.7%	81.9%	80.2%
HEP B (3+): [not part of full series]	86.2%	83.3%	76.7%
Hib (1+): [not part of full series]	97.2%	97.3%	84.0%

TABLE 2: KINDERGARTNERS UP-TO-DATE FOR 4:3:1 SERIES AT 2ND BIRTHDAY, BY REGION & YEAR

note: UTD is an abbreviation for Up-To-Date

	2001		2000		1999		1998		1997	
REGION	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD
ALL REGIONS	2306	71.0	1737	66.6	2072	63.9	2105	62.9	2160	59.2
Los Angeles Co.	663	70.0	559	64.6	629	59.8	518	62.9	667	56.2
Other So. Calif.	654	69.9	374	66.0	588	63.8	599	64.3	631	59.3
SF Bay Area	445	77.5	336	68.8	316	67.1	344	67.7	376	66.2
Central Coast	126	68.3	95	75.8	134	67.9	251	62.9	93	54.8
Central Valley	168	69.1	163	67.5	146	64.4	154	50.0	178	51.7
North Central Valley	159	62.9	135	65.2	143	67.8	135	57.8	140	60.0
Rural No. Calif.	91	75.8	75	62.7	116	67.2	104	64.4	75	70.7

TABLE 3: KINDERGARTNERS UP-TO-DATE FOR 4:3:1 SERIES AT 2ND BIRTHDAY, BY RACE & YEAR

note: UTD is an abbreviation for Up-To-Date

	2001		2000		1999	
RACE/ETHNICITY	Total Number	Percent UTD	Total Number	Percent UTD	Total Number	Percent UTD
ALL RACES/ETHNIC GROUPS	2306	71.0	1737	66.6	2072	63.9
White	733	72.4	555	70.3	725	68.3
Hispanic	1016	71.2	802	65.6	919	60.4
African-American	187	58.3	158	54.4	158	55.1
Asian	232	76.7	113	72.6	165	70.9
Other	43	55.8	70	70.0	54	72.2
Unknown	95	75.8	39	59.0	51	58.8

KINDERGARTEN RETROSPECTIVE SURVEY CALIFORNIA, 2001

TABLE 4: IMMUNIZATION LEVELS OF CALIFORNIA TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT									
RACE (N) % of total	3 mo. 1 Polio, 1 DTP	6 mo. ² 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	27.5 mo. ³ 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (2306) ¹ 100.0%	81.7% ⁴	94.4%	58.9%	85.6%	58.3%	40.8%	71.0%	75.0%	79.5%
White (733) 31.8%	84.0%	94.7%	64.5%	87.2%	59.2%	44.8%	72.4%	78.2%	83.0%
Hispanic (1016) 44.1%	81.4%	95.2%	54.9%	86.0%	59.7%	39.2%	71.2%	74.3%	78.4%
Black (187) 8.1%	69.5%	84.0%	36.4%	66.8%	46.0%	22.5%	58.3%	63.6%	70.6%
Asian (232) 10.1%	84.9%	97.4%	71.6%	94.4%	59.9%	47.8%	76.7%	78.9%	81.5%
Other (43) 1.9%	81.4%	95.4%	62.8%	86.1%	46.5%	30.2%	55.8%	60.5%	69.8%
Unknown (95) 4.1%	83.2%	95.8%	69.5%	83.2%	62.1%	50.5%	75.8%	76.8%	82.1%
1. Sample includes 22 children with exemptions									
2. This checkpoint represents children who began their IZ series early enough to potentially be up-to-date by the 24 month checkpoint									
3. CDC's National Immunization Survey includes all children in the age range 19 through 35 mos. A retrospective survey can approximate that sampling scheme by using the median age which is 27.5 mos.									
4. Confidence Intervals available in tables 12-15									

KINDERGARTEN RETROSPECTIVE SURVEY CALIFORNIA, 2001

TABLE 5: IMMUNIZATION LEVELS OF CALIFORNIA TODDLERS AT 24 MONTHS OF AGE (born in 1995): BY RACE AND REGION								
RACE (N) % of total	ALL REGIONS ² (N=2306)	LA Co. (663)	Other So. Cal. (654)	SF Bay Area (445)	Central Coast (126)	Central Valley (168)	No. Cen. Valley (159)	Rural No. Cal. (91)
ALL RACES (2306) ¹ 100.0%	71.0%	70.0%	69.9%	77.5%	68.3%	69.1%	62.9%	75.8%
White (733) 31.8%	72.4%	71.0%	68.1%	84.8%	69.2%	75.3%	64.2%	70.3%
Hispanic (1016) 44.1%	71.2%	72.0%	70.8%	71.8%	64.7%	68.1%	70.8%	n/a ³
Black (187) 8.1%	58.3%	51.5%	66.7%	60.0%	n/a ³	n/a ³	n/a ³	n/a ³
Asian (232) 10.1%	76.7%	79.7%	70.7%	83.2%	n/a ³	n/a ³	n/a ³	n/a ³
Other & Unkn. (138) 6.0%	69.6%	63.6%	76.9%	75.6%	n/a ³	n/a ³	n/a ³	n/a ³
1. Sample includes 22 children with exemptions								
2. Regions do not exactly match Field Rep assigned regions								
3. Percents are not calculated on a base of fewer than 25 children								
4. Confidence Intervals available in tables 12-15								
REGION	COUNTIES							
Los Angeles	Los Angeles							
Other So. Cal.	Imperial, Orange, Riverside, San Bernardino, San Diego							
SF Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma							
Central Coast	Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, Ventura							
Central Valley	Fresno, Kern, Kings, Madera, Merced, Tulare							
No. Central Valley	Sacramento, San Joaquin, Stanislaus							
Rural No. Cal.	Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Inyo, Lake, Lassen							
	Mariposa, Mendocino, Modoc, Mono, Nevada, Placer, Plumas, San Benito, Shasta, Sierra, Siskiyou,							
	Sutter, Tehama, Trinity, Tuolumne, Yolo, Yuba							

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TABLE 6: KINDERGARTNERS UP-TO-DATE AT AGE CHECKPOINTS, BY YEAR

AGE CHECKPOINT	2001 N= 2306	2000 N= 1737	1999 N = 2072
3 months	81.7%	81.9%	80.7%
7 months	58.9%	56.3%	51.2%
12 months	85.6%	83.8%	80.8%
19 months	58.3%	51.6%	48.3%
Two years	71.0%	66.6%	63.9%
Three years	79.5%	76.3%	74.5%

TABLE 7: IMMUNIZATION LEVELS OF CALIFORNIA TODDLERS AT 24 MONTHS OF AGE (born in 1995) : BY RACE AND ANTIGEN

RACE (N) % of total	FULL SERIES 3 p., 4 DTP, 1 MMR	Polio (3+)	DTP/Td (4+)	DTP/Td (3+) Not part of "Full Series"	MMR (1+)	Hep B Not part of "Full Series"	Hib (1+) Not part of "Full Series"
ALL RACES (2306) ¹ 100.0%	71.0%	91.5%	78.0%	94.4%	84.7%	86.2%	97.2%
White (733) 31.8%	72.4%	91.8%	77.9%	95.6%	86.8%	87.9%	98.2%
Hispanic (1016) 44.1%	71.2%	91.9%	78.0%	94.5%	85.2%	85.1%	96.7%
Black (187) 8.1%	58.3%	80.8%	65.8%	83.4%	78.6%	78.1%	93.6%
Asian (232) 10.1%	76.7%	95.3%	86.2%	97.4%	84.1%	89.7%	98.7%
Other (43) 1.9%	55.8%	93.0%	72.1%	95.4%	72.1%	90.7%	97.7%
Unknown (95) 4.1%	75.8%	94.7%	86.3%	96.8%	83.2%	89.5%	99.0%

1. Sample includes 22 children with exemptions

2. Confidence Intervals available in tables 12-15

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TABLE 8: IMMUNIZATION LEVELS OF CALIFORNIA TODDLERS AT 24 MONTHS OF AGE (born in 1995): BY BIRTHPLACE AND ETHNICITY

BIRTHPLACE (N=Sample Size)	TOTAL	Non-Hispanic (N)	Hispanic (N)
ALL Birthplaces ¹ (2306)	71.0%	70.7% (1285)	71.2% (1016)
SAME COUNTY (1168)	73.0%	71.5% (596)	74.5% (569)
OTHER CA (524)	75.8%	72.7% (293)	79.6% (230)
OTHER US (82)	73.2%	73.9% (69)	n/a ²
MEXICO (47)	19.2%	n/a ²	19.2% (47)
OTHER FOREIGN (48)	54.2%	60.5% (43)	n/a ²
UNKNOWN (437)	66.8%	68.0% (284)	64.5% (152)

1. Sample includes 22 children with exemptions

2. Percents are not calculated on a base of fewer than 25 children

TABLE 9: TYPE OF IMMUNIZATION RECORD PRESENTED AT KINDERGARTEN ENTRY

RECORD TYPE	Number	Percent
TOTAL	2306	100.0
CIR	1680	72.9
Other Immun. Record	191	8.3
Out-of-State Sch Record	23	1.0
Medical Record	133	5.8
CHDP form	47	2.0
Other	9	0.4
Not stated	223	9.7

TABLE 10: IMMUNIZATION LEVELS OF CALIFORNIA TODDLERS OF HEPATITIS B VACCINE AT VARIOUS AGE CHECKPOINTS

AGE CHECKPOINT (N = 2306) ¹	Percent Up-To-Date
3 mo. (at least 1 dose)	84.6
7 mo. (at least 2 doses)	84.3
12 mo. (3 doses)	88.8
19 mo. (3 doses)	83.9
24 mo. (3 doses)	86.2
3 yrs (3 doses)	90.5
4 yrs (3 doses)	93.7
5 yrs (3 doses)	96.8

1. Sample includes 22 children with exemptions

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TABLE 11: COMPARISON OF 2001 KINDERGARTEN RETROSPECTIVE SURVEY (KRS) AND 1997 NATIONAL IMMUNIZATION SURVEY (NIS)*

Kindergartners in this year's sample were approximately 2 years old in 1997. The KRS approximates the NIS's sample age range (19 to 35 months old) by using the median age which is 27.5 months.

	Percent of California children up-to-date		Percent of California children up-to-date		Percent of California children up-to-date	
ANTIGEN	1997	2001	1996	2000	1995	1999
	NIS ¹	KRS	NIS ²	KRS	NIS ³	KRS
	(19 to 35 mo. age)	(27.5 mo. checkpoint)	(19 to 35 mo. age)	(27.5 mo. checkpoint)	(19 to 35 mo. age)	(27.5 mo. checkpoint)
Polio (3+)	90	93.0	91	93.5	85	89.6
DTP (4+)	79	82.7	81	80.7	74	79.2
MMR (1+)	89	86.8	90	83.9	89	82.6
Hib (3+)	91	97.0	90	n/a	90	n/a
hep B (3+)	83	87.7	82	83.0	74	77.0
4:3:1 series	76 (73-79)	75.0 (73.2-76.8)	78 (75-81)	71.0 (69-73)	71 (66-76)	69 (67-71)
4:3:1:3(Hib) series	74 (71-77)	74.7 (73.0-76.5)	76 (73-79)		69 (64-73)	

1. CDC. National, State, and Urban Area Vaccination Coverage Levels Among Children Aged 19-35 Months – United States, 1997. MMWR, July 10, 1998 / 47(26):547-554

2. CDC. Status Report on the Childhood Immunization Initiative: National, State, and Urban Area Vaccination Coverage Levels Among Children Aged 19-35 Months – U.S., 1996. MMWR, July 25, 1997 / 46(29):61-64

3. CDC. National, State, and Urban Area Vaccination Coverage Levels Among Children Aged 19-35 Months – United States, January-December 1995. MMWR, February 28, 1997 / 46(08):176-182

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TABLES 12-15 CONFIDENCE INTERVALS

TABLE 12: PERCENT UP-TO-DATE BY RACE		
2001		
RACE	Percent UTD	95% Confidence Interval
ALL RACES	71.0	69.1 - 72.8
White	72.4	69.2 - 75.7
Hispanic	71.2	68.4 - 75.0
African-American	58.3	51.2 - 65.4
Asian	76.7	71.3 - 82.2
Other	55.8	41.0 - 70.7
Unknown	75.8	67.2 - 84.4

TABLE 13: PERCENT UP-TO-DATE BY AGE CHECKPOINT		
2001		
AGE	Percent UTD	95% Confidence Interval
3 mo	81.7	80.0 - 83.4
6 mo	94.4	93.4 - 95.4
7 mo	58.9	56.8 - 61.1
12 mo	85.6	84.1 - 87.1
19 mo	58.3	56.2 - 60.4
all check points	40.8	38.6 - 42.9
24 mo	71.0	69.0 - 72.9
27.5 mo	75.0	73.1 - 76.8
36 mo	79.5	77.8 - 81.2

TABLE 14: PERCENT UP-TO-DATE BY REGION		
2001		
REGION	Percent UTD	95% Confidence Interval
ALL REGIONS	71.0	69.1 - 72.8
L.A. County	70.0	66.5 - 73.5
Other So. California	69.9	66.4 - 73.4
SF Bay	77.5	73.7 - 81.4
Central Coast	68.3	60.1 - 76.4
Central Valley	69.1	62.1 - 76.0
No. Central Valley	62.9	55.4 - 70.4
Rural No. California	75.8	67.0 - 84.6

TABLE 15: PERCENT UP-TO-DATE BY ANTIGEN		
2001		
ANTIGEN	Percent UTD	95% Confidence Interval
ALL ANTIGENS	71.0	69.1 - 72.8
Polio	91.5	90.3 - 92.6
DTP	78.0	76.3 - 79.7
MMR	84.7	83.3 - 86.2
Hep B	97.2	96.5 - 97.9

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Figure 1: Kindergartners Up-To-Date at 2nd Birthday, 1997 to 2001

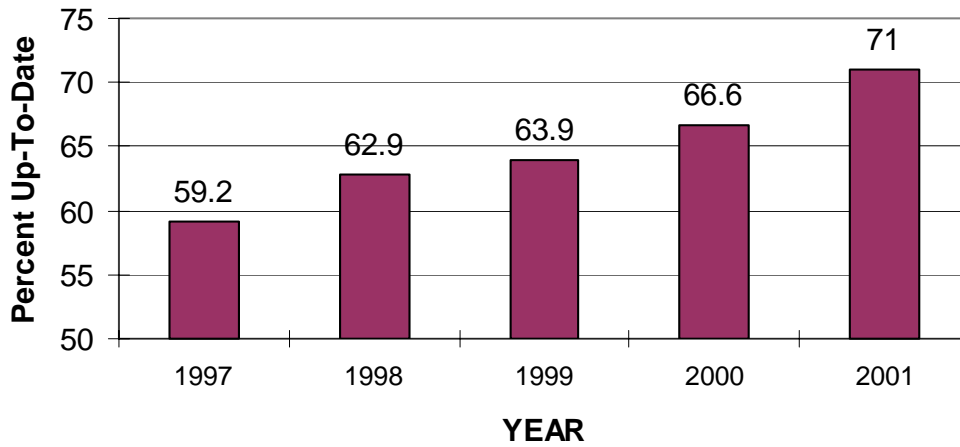


Figure 2: Kindergartners Up-To-Date at 2nd Birthdate, by Region
95% confidence intervals represented by "I" marker bars

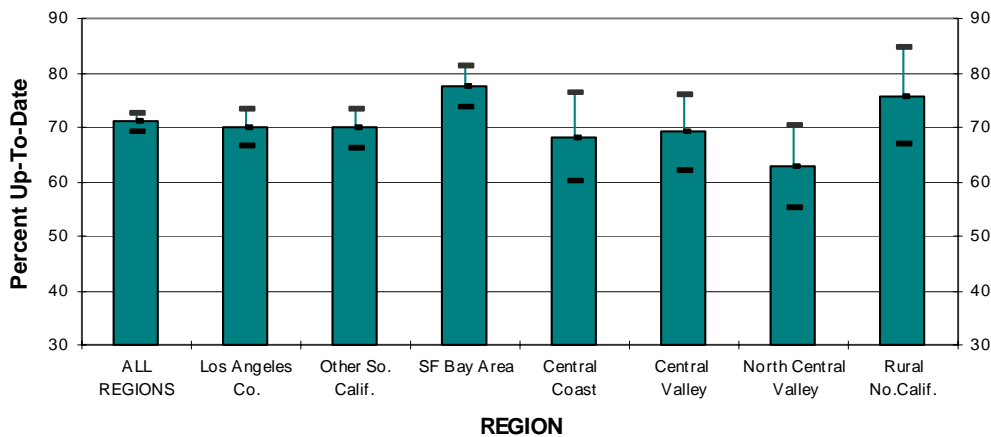
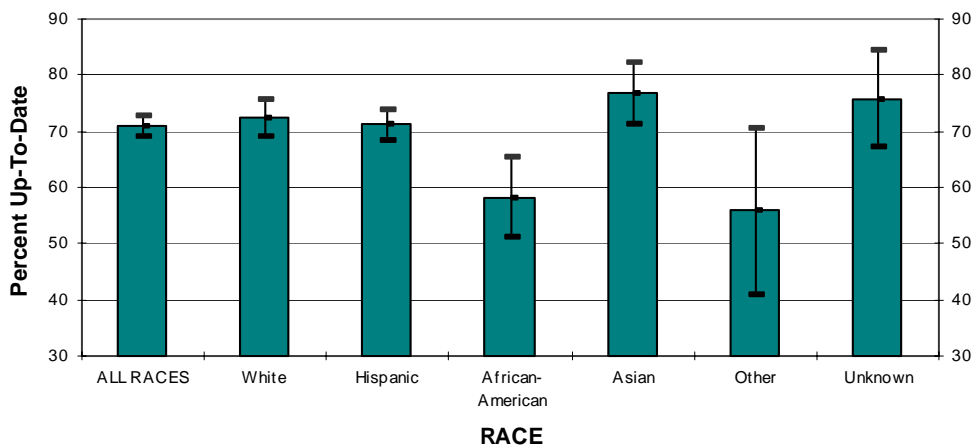
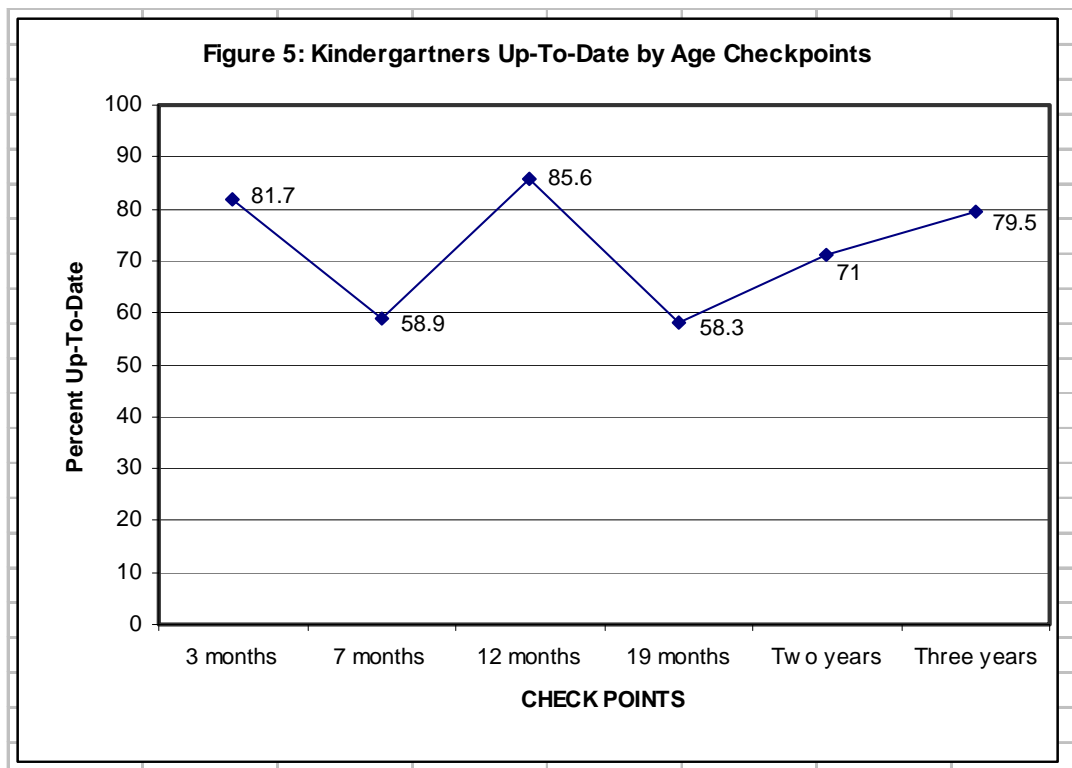
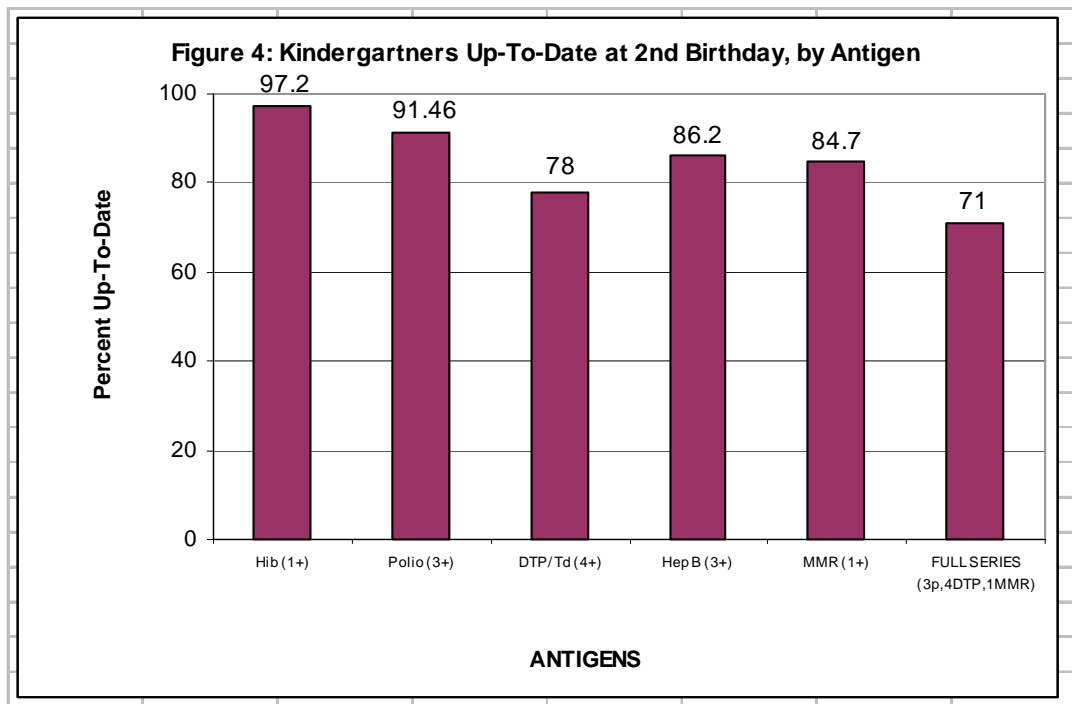


Figure 3: Kindergartners Up-To-Date at 2nd Birthdate, by Race
95% confidence intervals represented by "I" marker bars



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REGIONAL TABLES: IMMUNIZATION LEVELS OF LOS ANGELES COUNTY ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (663)²	81.6%	56.9%	84.5%	56.4%	37.9%	70.0%	78.7%
White (145)	88.3%	64.1%	88.3%	55.2%	40.0%	71.0%	83.5%
Hispanic (353)	81.3%	53.3%	84.7%	60.6%	38.5%	72.0%	79.6%
Black (68)	69.1%	36.8%	66.2%	39.7%	23.5%	51.5%	64.7%
Asian (64)	81.3%	75.0%	95.3%	59.4%	46.9%	79.7%	82.8%
1. LA Co. sample represents 28.8% of state's total sample, and includes 2 children with exemptions							
2. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Other and Unknown							

REGIONAL TABLES: IMMUNIZATION LEVELS OF OTHER SO. CALIFORNIA REGION ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT (Imperial Co., Orange Co., Riverside Co., San Bernardino Co., San Diego Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (654)³	80.9%	54.3%	83.9%	57.2%	37.3%	69.9%	78.8%
White (207)	82.6%	61.4%	84.1%	52.7%	40.6%	68.1%	78.7%
Hispanic (329)	81.8%	52.3%	86.6%	60.2%	37.1%	70.8%	78.7%
Black (51)	60.8%	25.5%	64.7%	52.9%	19.6%	66.7%	78.4%
Asian (41)	85.4%	61.0%	82.9%	58.5%	39.0%	70.7%	78.1%
1. Other So. California regional sample represents 28.4% of state's total sample, and includes 5 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Other and Unknown							

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REGIONAL TABLES: IMMUNIZATION LEVELS OF SF BAY AREA REGION ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT (Alameda Co., Contra Costa Co., Marin Co., Napa Co., San Francisco Co., San Mateo Co., Santa Clara Co., Solano Co., Sonoma Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (445)³	87.4%	71.9%	90.6%	65.4%	53.0%	77.5%	83.6%
White (138)	89.9%	77.5%	94.9%	72.5%	58.7%	84.8%	91.3%
Hispanic (142)	83.8%	67.6%	86.6%	62.0%	52.1%	71.8%	76.8%
Black (35)	80.0%	54.3%	74.3%	48.6%	25.7%	60.0%	71.4%
Asian (89)	89.9%	77.5%	98.9%	67.4%	57.3%	83.2%	86.5%
1. SF Bay Area regional sample represents 19.3% of state's total sample, and includes 6 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Other and Unknown							

REGIONAL TABLES: IMMUNIZATION LEVELS OF CENTRAL COAST REGION ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT (Monterey Co., San Luis Obispo Co., Santa Barbara Co., Santa Cruz Co., Ventura Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (126)³	80.2%	62.7%	85.7%	61.9%	46.8%	68.3%	78.6%
White (39)	82.1%	69.2%	87.2%	61.5%	48.7%	69.2%	84.6%
Hispanic (51)	84.3%	58.8%	84.3%	56.9%	41.2%	64.7%	70.6%
1. Central Coast regional sample represents 5.5% of the state's total sample, and includes 3 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Black, Asian, Other, and Unknown							

KINDERGARTEN RETROSPECTIVE SURVEY CALIFORNIA, 2001

REGIONAL TABLES: IMMUNIZATION LEVELS OF CENTRAL VALLEY REGION ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT							
(Fresno Co., Kern Co., Kings Co., Madera Co., Merced Co., Tulare Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (168)³	78.0%	54.8%	81.0%	53.6%	38.1%	69.1%	77.4%
White (73)	83.6%	64.4%	83.6%	63.0%	52.1%	75.3%	83.6%
Hispanic (72)	72.2%	51.4%	83.3%	48.6%	29.2%	68.1%	75.0%
1. Central Valley regional sample represents 7.3% of the state's total sample, and includes 4 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Black, Asian, Other, and Unknown							

REGIONAL TABLES: IMMUNIZATION LEVELS OF NO. CENTRAL VALLEY REGION ¹ TODDLERS (born in 1995): BY RACE AND AGE CHECKPOINT							
(Sacramento Co., San Joaquin Co., Stanislaus Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (159)³	76.7%	50.3%	87.4%	51.6%	29.6%	62.9%	74.2%
White (67)	77.6%	50.8%	85.1%	56.7%	31.3%	64.2%	79.1%
Hispanic (48)	83.3%	47.9%	95.8%	58.3%	33.3%	70.8%	77.1%
1. No. Central Valley regional sample represents 6.9% of the state's total sample, and includes 0 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Black, Asian, Other, and Unknown							

KINDERGARTEN RETROSPECTIVE SURVEY CALIFORNIA, 2001

REGIONAL TABLES: IMMUNIZATION LEVELS OF RURAL NO. CALIFORNIA REGION ¹ TODDLERS(born in 1995): BY RACE AND AGE CHECKPOINT							
(Alpine Co., Amador Co., Butte Co., Calaveras Co., Colusa Co., Del Norte Co., El Dorado Co., Glenn Co., Humboldt Co., Inyo Co., Lake Co., Lassen Co., Mariposa Co., Mendocino Co., Modoc Co., Mono Co., Nevada Co., Placer Co., Plumas Co., San Benito Co., Shasta Co., Sierra Co., Siskiyou Co., Sutter Co., Tehama Co., Trinity Co., Tuolumne Co., Yolo Co., Yuba Co.) ²							
RACE (N)	3 mo. 1 Polio, 1 DTP	7 mo. 2 Polio, 3 DTP	12 mo. 2 Polio, 3 DTP	19 mo. 3 p., 4 DTP, 1 MMR	utd at all checkpts	24 mo. 3 p., 4 DTP, 1 MMR	3 yrs. 3 p., 4 DTP, 1 MMR
ALL RACES (91)³	78.0%	60.4%	85.7%	60.4%	42.9%	75.8%	84.6%
White (64)	75.0%	59.4%	84.4%	57.8%	42.2%	70.3%	79.7%
1. Rural No. California regional sample represents 4.0% of the state's total sample, and includes 2 children with exemptions							
2. Regions do not exactly match Field Rep assigned regions							
3. Percents are not calculated on a base of fewer than 25 children, so coverage rates are not available for the following groups: Hispanic, Black, Asian, Other, and Unknown							